

CLAIMS

What is claimed is:

1 1. A transmitter-receiver system comprising:
2 a rolling code receiver that generates a sequence of unique codes based on
3 a rolling code algorithm; and
4 a fixed code transmitter including a memory that contains a set of fixed
5 codes, said fixed code transmitter operable to transmit one or more codes of the
6 set of fixed codes to operate the rolling code receiver.

1 2. The system of claim 1, wherein the set of fixed codes having fewer
2 codes than a total number of unique codes that is generated by the rolling code
3 receiver.

1 3. The system of claim 1, wherein the memory of the fixed code
2 transmitter contains a second set of fixed codes, said fixed code transmitter
3 operate to transmit one or more codes of the second set of fixed codes to operate
4 a second rolling code receiver.

1 4. The system of claim 1, wherein the rolling code receiver, upon
2 reception of a received code, to generate a current code and to actuate a device if
3 the received code is within a code window between the current code and the
4 current code plus a predetermined number of codes.

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1 5. The system of claim 1, wherein said rolling code receiver includes a
2 code window, and said fixed code transmitter, upon activation, to transmit first
3 and second codes to said rolling code receiver, said first code being within a
4 predetermined number of codes of said second code along a code sequence, said
5 rolling code receiver to be activated in response to receiving the first and second
6 codes.

1 6. A fixed code transmitter comprising:
2 a signal transmission circuit;
3 a memory that includes a set of fixed codes for operating a rolling code
4 receiver;
5 a processor coupled to the signal transmission circuit and memory, said
6 processor, in response to actuation of an input, to retrieve one or more codes of
7 the set of fixed codes from the memory and transmit the one or more fixed codes,
8 using the signal transmission circuit, to activate the rolling code receiver.

1 7. The fixed code transmitter of claim 6, wherein the set of fixed codes
2 having fewer codes than a total number of unique codes that can be generated by
3 the rolling code receiver.

1 8. The fixed code transmitter of claim 6, wherein said memory further
2 includes a second set of fixed codes for controlling a second rolling code receiver,
3 said processor to (i) detect a selection request corresponding to one of the rolling
4 code receivers, (ii) retrieve one or more codes of one of the first set and second

5 set of fixed codes corresponding to a selected rolling code receiver, and (iii)
6 transmit said retrieved one or more codes to actuate the selected rolling code
7 receiver.

1 9. The fixed code transmitter of claim 6, wherein said retrieved one or
2 more of fixed codes includes a code pair, having a first code and a second code,
3 said second code to be within a predetermined number of codes from said first
4 code, said processor to transmit the code pair to operate the rolling code receiver.

1 10. The fixed code transmitter of claim 9, wherein said predetermined
2 number is between 2 and 100.

1 11. A method of operating a rolling code receiver using a fixed code
2 transmitter comprising:

3 capturing a plurality of codes from a rolling code transmitter
4 corresponding to the rolling code receiver;
5 identifying a set of fixed codes that will operate the rolling code receiver;
6 storing said set of fixed codes in a memory of said fixed code transmitter;
7 and
8 activating said rolling code receiver by transmitting, from said fixed code
9 transmitter, one or more codes of said set of fixed codes.

1 12. The method of claim 11 wherein said set of fixed codes has fewer
2 codes than a total number of unique codes that is generated by the rolling code
3 receiver.

1 13. The method of claim 11, further comprising:
2 capturing a second plurality of codes from an additional rolling code
3 transmitter corresponding to an additional rolling code receiver;
4 identifying an additional set of fixed codes that will operate the additional
5 rolling code receiver;
6 storing said additional set of fixed codes in the memory of said fixed code
7 transmitter; and
8 accessing one or more of said additional set of fixed codes based on a user
9 selection; and
10 transmitting, from said fixed code transmitter, one or more codes from
11 said additional set of fixed codes to activate the additional rolling code receiver.

1 14. The method of claim 11, wherein said activating said rolling code
2 receiver comprises, activating said rolling code receiver by transmitting, from the
3 fixed code transmitter, a code pair of said set of fixed codes comprised of a first
4 code and a second code, said second code to be within a predetermined number
5 of codes from said first code along a code sequence.

1 15. A method of operating a rolling code receiver with a fixed code
2 transmitter comprising:

3 transmitting, from the fixed code transmitter, one or more codes from a
4 set of fixed codes; and
5 operating the rolling code receiver using the one or more codes.

1 16. The method of claim 15, wherein said set of fixed codes is a subset
2 of a rolling code sequence of the rolling code receiver.

1 17. The method of claim 15, wherein prior to said transmitting, said
2 method comprises:

3 capturing a plurality of codes from a rolling code transmitter
4 corresponding to the rolling code receiver;
5 identifying the set of fixed codes that is capable of operating said rolling
6 code receiver;

7 storing said set of fixed codes in a memory of said fixed code transmitter;
8 and

9 accessing one or more of said set of fixed codes for transmission based on
10 a user selection.

1 18. A transmitter-receiver system comprising:
2 a rolling code receiver coupled to a device, said rolling code receiver to
3 generate a sequence of unique codes based on a rolling code algorithm, said
4 rolling code receiver to actuate the device if a received code is equal to a current
5 generated code in the sequence of unique codes; and

6 a transmitter including a memory that contains a set of codes, said
7 transmitter, upon each actuation, to transmit one or more of the set of codes to
8 operate the rolling code receiver to actuate the device, said set of codes having
9 fewer codes than a total number of codes in the sequence of unique codes.

1 19. The system of claim 18 wherein said rolling code receiver to actuate
2 the device if the received code is equal to a code within a code window defined
3 by the current generated code and the current generated code plus a
4 predetermined number.

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1 20. A transmitter for operating a rolling code receiver, comprising:
2 a fixed code transmitter including a memory that contains a set of fixed
3 codes, said fixed code transmitter to transmit one or more codes of the set of
4 fixed codes to operate the rolling code receiver.

1 21. The transmitter of claim 20 wherein the set of fixed codes has fewer
2 codes than a total number of unique codes that is generated by the rolling code
3 receiver.